Innovative Approaches to Prompt Identification and Treatment of Newborns Exposed to Opioids: A Congressional Briefing

As our nation continues to confront a deep and far-reaching opioid and related drug abuse crisis, more attention is needed on treating the youngest and most vulnerable victims of abuse – newborn babies. Known as neonatal abstinence syndrome (NAS), researchers estimate that the number of babies born withdrawing from opioids has increased 5-fold between 2000 and 2012.[1] Babies with NAS experience painful withdrawal symptoms including extreme irritability, feeding intolerance and even seizures if not promptly treated.

The signs of NAS are rarely evident immediately at birth, and sometimes do not appear until the 4th day of life. Newborns typically leave the hospital within 1-2 days of delivery, meaning that symptoms of NAS may not be appear until after the baby has gone home. Identification of all opioid exposed babies prior to discharge is imperative, as delaying the diagnosis and delivery of NAS treatments increases the risk of medical complications, and in extreme cases, even death. Early diagnosis is the first step to standardizing care, which allows for more effective treatments and shorter hospitalizations resulting in better health outcomes and healthcare savings.

Longstanding practice is based upon risk-based screening of expectant mothers to determine likelihood of drug abuse and risk for NAS. However, these screenings often fall short because of a reliance on honest and accurate answers, which may fail to detect cases of drug misuse. For example, risk-based verbal questionnaires include a question about tobacco use during pregnancy. Based on laboratory validation, about half of the mothers who tested positive for tobacco use denied use on the questionnaire.[2]

To address these limitations, Cincinnati Children's Hospital Medical Center initiated a pilot program in 2012 to compare risk-based screening with universal testing of all expectant mothers delivering at a single maternity hospital in the Cincinnati region. The study demonstrated that the verbal risk-based screening questionnaire would have missed 23% of mothers who tested positive using the universal drug testing approach. Prompt identification of these newborns allowed for early administration of treatments, including more precise use of pharmacologic treatments, yielding better health outcomes.[3] Based on these findings, 18 maternity hospitals in the Cincinnati region now employ universal testing, impacting over 30,000 births per year. Additionally, other regions across the State of Ohio have adopted or are considering universal testing.

A transition from risk-based screening to universal testing should lead to prompt identification and initiation of treatment for babies born after *in utero* opioid exposure, and better health outcomes and lower healthcare costs overall. On February 28, 2018, leaders from Cincinnati Children's will present results of their program, focusing on the continuum from early diagnosis to early treatment for both the newborn and the mother. They will also present information about the value of long-term follow-up for these babies after hospital discharge. This session will also include a discussion of policy needs that if addressed, would enhance further spread of universal testing and timely NAS treatment and intervention.

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[1] Jama Pediatr. 2017. Patrick. [2] J Perinatol. 2016. Hall [3] J Peds. 2015. Wexelblatt